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VOL. 23 NO. 15 April 13, 1973

Cooperative Economic Insect Report

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PLANT PROTECTION AND QUARANTINE PROGRAMS
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
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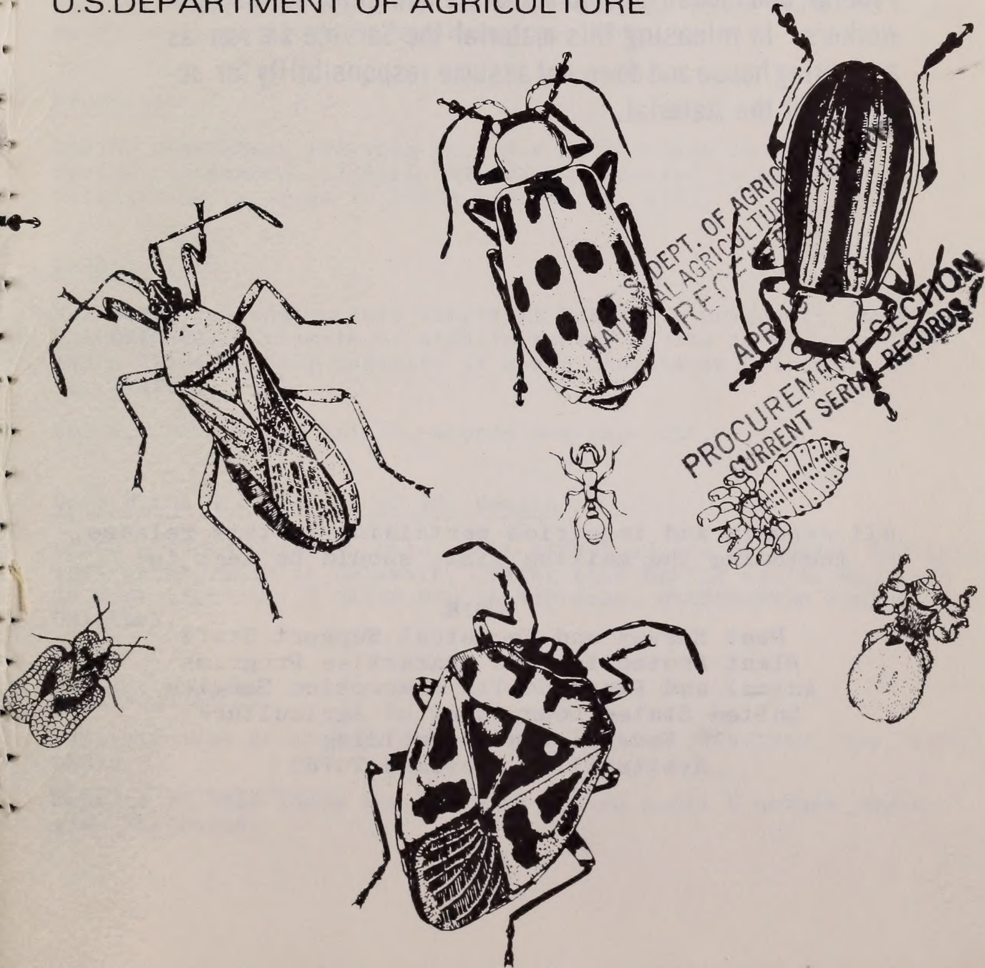

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The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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Volume 23 April 13, 1973 Number 15

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

SOUTHERN CORN ROOTWORM severely damaged seedling grain sorghum in Coastal Bend area of Texas. (p. 209).

ALFALFA WEEVIL larvae exceeded economic threshold in Piedmont and Coastal Plain areas of Virginia and in western and central areas of Tennessee. Infestations increasing in other areas of Nation. (pp. 209-210).

VEGETABLE WEEVIL infested spearmint and peppermint in Oregon for a new State record. (p. 211).

WESTERN FLOWER THRIPS moderate to heavy in citrus groves in Salt River Valley of Arizona. (p. 212).

NORTHERN FOWL MITE moderate on large chicken flock in Mississippi, heavy on large flock in Oklahoma. (p. 214).

Prediction

SPRING CANKERWORM problems expected to increase in Nebraska. Spring cankerworm and FALL CANKERWORM expected to cause severe defoliation of trees in North Dakota. (p. 212).

Detection

New State records include VEGETABLE WEEVIL in Oregon (p. 211), a BRACONID WASP parasite of alfalfa weevil adults in Ohio (p. 214), and a EULOPHID WASP parasite of scale insects in Colorado (p. 214).

For new county and island records see page 215.

Some First Occurrences of the Season

BLACK CUTWORM moths in Ohio. BOLL WEEVIL adults in Texas. EASTERN TENT CATERPILLAR in Delaware. CEREAL LEAF BEETLE adults and eggs in West Virginia. A GRASS BUG in Nebraska. GRASSHOPPER nymphs in Oklahoma.

Special Reports

Mediterranean Fruit Fly. Selected References 1929-1949. (pp. 217-220).

Reports in this issue are for week ending April 6 unless otherwise indicated.

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WEATHER OF THE WEEK ENDING APRIL 9

Reprinted from Weekly Weather and Crop Bulletin supplied by Environmental Data Service, NOAA.

PRECIPITATION: The eastern Corn Belt and a strip extending from Kentucky through Arkansas into East Texas received heavy rains ranging from 0.8 to 2 inches which worsened the already bad flood situation. Throughout parts of the Deep South and northern Florida 2 to 4 inches of torrential rain soaked soils. By contrast, most of the west coast and almost all areas west of the Rockies received no precipitation. The Mountain States and western Great Plains had unseasonal snow and blizzards due to frigid arctic air. Monday brought one inch of snow to Wisconsin, Iowa, eastern Nebraska, and Kansas. Rain increased flooding from Illinois to Louisiana. The Ohio River at Cairo, Illinois, crested at 16 feet above flood stage, less than 4 feet below the record of 1937 crest. Tuesday, rain fell over most of the Nation. A Low in southeastern Louisiana set off intense thundershowers over the Gulf States. These reached severe proportions as the storm traveled east. Torrential rains struck southern Georgia and northern Florida. Wednesday morning, Jacksonville, Florida, had received 7.57 inches of rain, Brunswick, Georgia, 2.33 inches. Scattered showers continued all day Wednesday throughout the Southeast, extremely heavy showers throughout Florida. Sun City, 17 miles north of Tampa, Florida, received 5.50 inches of rain in a 2-hour period. Locally heavy rains caused flash flooding in Georgia. Late Wednesday and early Thursday, the Mississippi flood crest moved into lower Mississippi. The river was 6.5 feet above flood stage as it passed through Memphis, Tennessee. A near record flood of 7 feet above flood stage raged along the Suwannee River in northern Florida. Thursday, the storm brought winter back to New England blanketing Maine, Vermont, and New Hampshire with snow. The storm also spread rain down the Ohio Valley, otherwise most of the Nation enjoyed fair weather. Friday, light rains and snows fell over New England, the Applachians, and westward into Minnesota. Heavier snows prevailed over Montana and North Dakota. Weather of the week continued on page 216.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

BEET LEAFHOPPER (*Circulifer tenellus*) - CALIFORNIA - Threatening numbers on roadside *Chenopodium*, April 1. Treatments necessary to protect Imperial Valley croplands from damaging populations. (Cal. Coop. Rpt.).

GREENBUG (*Schizaphis graminum*) - TEXAS - Generally light throughout Rolling Plains. Ranged 1-10 per row foot of small grains in Knox, Haskell, Throckmorton, Wilbarger, and Foard Counties. Ranged 20-34 per row foot in some fields in Haskell and Wilbarger Counties. Little or no activity reported from Young and Baylor Counties. Some controls applied in Hall County. Beneficial species, mainly spiders and nabids, still active in small grains in Wilbarger County. (Boring).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - NEW MEXICO - Ranged 5-10 per square foot in alfalfa near Carlsbad, Eddy County. (N.M. Coop. Rpt.).

CORN, SORGHUM, SUGARCANE

SOUTHERN CORN ROOTWORM (*Diabiotica undecimpunctata howardi*) - TEXAS - Heavy populations caused severe damage to seedling grain sorghum in Calhoun, Victoria, and Matagorda Counties. (Cole).

BLACK CUTWORM (*Agrotis ipsilon*) - OHIO - Adults collected in blacklight traps on March 30 for first emergence of season. (Rings).

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - OHIO - Populations of overwintering larvae generally lower than past 2 years. Heavy populations may develop in some isolated fields. (Musick).

SMALL GRAINS

WINTER GRAIN MITE (*Penthaleus major*) - TEXAS - Light, ranged 3-11 per row foot in small grains in Knox and Foard Counties. In Haskell County, 28 per row foot taken from one field. Number of infested fields and populations remained light in Rolling Plains area. (Boring). OKLAHOMA - Present in most wheat fields in Logan and Kingfisher Counties; ranged up to 15 per linear foot. (Okla. Coop. Sur.).

ENGLISH GRAIN APHID (*Macrosiphum avenae*) - FLORIDA - Nymphs and adults taken as follows: 75 per 100 sweeps of wheat and 140 per 100 sweeps of oats (both hosts in green seedhead stage) at Gainesville, Alachua County. (Fla. Coop. Sur.).

A LEAFHOPPER (*Dikraneura carneola*) - UTAH - Active in margins of winter wheat at Petersboro, Cache County. (Knowlton).

FORAGE LEGUMES

ALFALFA WEEVIL (*Hypera postica*) - TEXAS - Infestations heavy on roadside clover in Wood County. This is a new county record. Also noted on burr clover 4 miles west of Marble Falls and active in Donley and Collingsworth Counties. Larvae caused some terminal damage to alfalfa in Fisher County. Terminal damage ranged 5-10 percent in several fields near Roby, Fisher County. (Tapscott et al.). OKLAHOMA - Terminal infestations ranged 25-75 percent in alfalfa in Washita, Caddo, and Beckham Counties, and averaged 44 percent in Logan County and 14 percent in Washington County. Larvae ranged 60-100 per square foot in Tulsa County, 60-75 in Greer County, and 1-20 in Roger Mills County. Heavy in Payne and Bryan Counties and light in Pawnee and Pontotoc Counties. (Okla. Coop. Sur.). ARKANSAS - Development slow in northwest area, probably due to low temperatures. One adult and 31 larvae taken in 10 sweeps in Washington County fields. Expected to increase rapidly with warm weather. (Boyer). MISSOURI - Larvae infested alfalfa throughout State. Ranged 0.5-2.1 per stem in southwest area. Terminal damage ranged 5-30 percent. (Munson).

INDIANA - All H. postica eggs laid prior to March 1 now hatched in southern third of State. No hatch to date in northern half of State but expected to begin as far north as Indianapolis next 7 days. Larvae per 100 stems by county as follows: Daviess 58, Dubois 127, Harrison 63. (Huber, Meyer). OHIO - Egg counts taken in 2 to 4-inch tall alfalfa in southwestern and central areas showed average of 11 per square foot in Clinton County and 36 per square foot in Franklin County. No larvae seen. (Horn, Flessel). KENTUCKY - Larvae averaged 3.4 per alfalfa tip in Warren and Barren Counties; 78 percent of tips infested. In Nelson County, 40-50 percent of tips infested with average of 1.2 larvae per tip; damage evident on 90 percent of tips. In northern areas, 20-30 percent of tips infested; larvae averaged less than one per tip. (Barnett). MARYLAND - H. postica larval surveys negative in Cecil, Kent, and Queen Annes Counties. Egg hatch continued in Baltimore, Frederick, Carroll, and Prince Georges Counties, but larvae likely to be killed by frosts. Peak hatch expected within next 2 weeks. (U. Md., Ent. Dept.).

VIRGINIA - Survey conducted on 138 acres of alfalfa in 15 fields in 8 counties showed infestations exceeded economic threshold (25 of 50 tips infested) in 7 fields. Defoliation by H. postica averaged 10.1 percent. Larvae growing rapidly; growers in Piedmont and Coastal Plain areas should treat soon. (Allen). TENNESSEE - Infestations exceeded economic threshold in 6 counties; Warren, Grundy, Obion, Franklin, Fayette, and Hardeman. (Gordon, Bruer). NORTH CAROLINA - Larvae averaged 5 per alfalfa plant in 3 Rowan County fields. About 80 percent of foliage damaged. Total loss expected if fields not treated. (Bowers). MISSISSIPPI - Vacuum sample of 100 square feet of alfalfa in Bolivar County yielded estimated 197,000+ larvae per acre. This is 5-fold increase in last 14 days. Averaged 1+ larvae per plant. Ragging of terminals evident. (Schuster).

EGYPTIAN ALFALFA WEEVIL (Hypera brunneipennis) - ARIZONA - Larvae per 100 sweeps of alfalfa ranged 10-200 in Yuma Valley and 10-80 at Wellton, Yuma County; averaged 131 in Maricopa County. (Ariz. Coop. Sur.).

CLOVER HEAD WEEVIL (Hypera meles) - ARKANSAS - One adult per 10 sweeps taken in Washington County. Species usually not numerous in northwest area. (Boyer).

NORTHERN CORN ROOTWORM (Diabrotica longicornis) - WEST VIRGINIA - Collected in alfalfa at Morgantown, Monongalia County, November 2, 1971, by B.D. Wojcik. Determined by Butler. This is a new county record. (Hacker).

PEA APHID (Acyrthosiphon pisum) - NEW MEXICO - Ranged 50-100 per square foot in alfalfa at Carlsbad, Eddy County, with some fields treated. Populations still very light in Dona Ana County. (N.M. Coop. Rpt.). TEXAS - Light on alfalfa in Donley and Collingworth Counties. (Clymer). OKLAHOMA - Light in most alfalfa fields in Beckham, Caddo, and Washita Counties but ranged 30-40 per stem in a few fields. Ranged up to 200 per square foot in Roger Mills County. (Okla. Coop. Sur.). ARKANSAS - Increased to about 2,000 per 100 sweeps in alfalfa in northwestern area. (Boyer). MISSOURI - Ranged 3-18 per 10 sweeps of alfalfa in southwest and south-central areas. Counts very light but could increase rapidly if cool weather continues. (Munson).

REDBACKED CUTWORM (Euxoa ochrogaster) - WASHINGTON - Full-grown larvae found April 3 in soil of alfalfa seed field 20 miles north of Pasco, Franklin County; maturity probably result of unusually warm weather during February and March. (Johansen).

ALFALFA LEAF BLOTCH-MINER (Agromyza frontella) - MARYLAND - Surveys negative Statewide. (U. Md., Ent. Dept.).

COTTON

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Emerging from ground trash in Calhoun, Victoria, and Guadalupe Counties. Total of 115 taken in pheromone traps throughout south-central and Coastal Bend areas. (Green).

MISCELLANEOUS FIELD CROPS

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - OREGON - Larvae and pupae collected on March 22, 1973, in spearmint field at Dever, Linn County, by R.R. Robinson. Determined by P. Ritcher. Delimiting surveys showed about 250 acres of spearmint and peppermint infested, heavy in some areas. This is a new State record. (Westcott, Penrose).

COLE CROPS

DIAMONDBACK MOTH (Plutella xylostella) - FLORIDA - Larvae very heavy on unsprayed cabbage, caused severe damage at Belle Glade, Palm Beach County. (Fla. Coop. Sur.).

DECIDUOUS FRUITS AND NUTS

PEAR PSYLLA (Psylla pyricola) - CONNECTICUT - Adults and eggs observed on pear at Storrs, Tolland County, March 29. Egg laying probably began 3 or 4 days earlier. (Savos, Apr. 3). MICHIGAN - Adult activity and egg laying reported from Grand Rapids, Kent County, south since March 27; much earlier than usual. Many orchardists applied sprays by March 31. (Sauer). WASHINGTON - Nymphs (one alive, one dead) seen on Bartlett pear at Wapato, Yakima County. (Gregorich).

PEACH TWIG BORER (Anarsia lineatella) - CALIFORNIA - Damaged new peach growth in many locations over State. Treatment problem due to excessive moisture in orchards. (Cal. Coop. Rpt.).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - TENNESSEE - Tents noted on peach, cherry, and apple in Davidson, Rutherford, Sumner, Robertson, Cheatham, Bradley, Hamilton, Monroe, Polk, Marion, Fayette, and Hardeman Counties. Light feeding noted. (Greene et al.).

EUROPEAN RED MITE (Panonychus ulmi) - MARYLAND - No hatch to date; egg counts heavy in two 50-acre orchards in Baltimore and Washington Counties. Overwintered eggs light in other orchards surveyed. (U. Md., Ent. Dept.).

CITRUS

WESTERN FLOWER THRIPS (Frankliniella occidentalis) - ARIZONA - Ranged moderate to heavy in citrus groves in Salt River Valley, Maricopa County. (Ariz. Coop. Sur.).

CITRUS THRIPS (Scirtothrips citri) - ARIZONA - Surveys indicate very light infestations in groves at Deer Valley and Chandler Heights, Maricopa County. (Ariz. Coop. Sur.).

CITRUS RED MITE (Panonychus citri) - ARIZONA - Few heavy counts still found in groves on Yuma Mesa, Yuma County. (Ariz. Coop. Sur.).

SMALL FRUITS

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - WASHINGTON - Damaged 5 acres of strawberries at Pasco, Franklin County. (Anderson).

FOREST AND SHADE TREES

EASTERN TENT CATERPILLAR (Malacosoma americanum) - DELAWARE - Eggs hatched on most hosts throughout State. (Burbutis). MARYLAND - Eggs hatched in Somerset County. Based on overwintering egg counts, light to moderate infestations expected this season. (U. Md., Ent. Dept.). NORTH CAROLINA - Larvae and tents observed throughout State. First observed in mountain counties April 4. First reports of season from Wake and Forsyth Counties March 16. (Lott, Hunt). MISSISSIPPI - Egg hatch about complete in Oktibbeha County. Larvae about full grown. (Robinson). KENTUCKY - Major egg hatch this year occurred March 22 compared to early April in 1972. Larvae hatched before leaf buds opened in 1973. Current activity heaviest in Simpson, Logan, Barren, and Warren Counties. (Barnett). TEXAS - Heavy populations damaged shade trees in Brazos and Tom Green Counties. (Green, Jones).

FOREST TENT CATERPILLAR (Malacosoma disstria) - TEXAS - Severe damage to oaks and other trees reported in Matagorda, Calhoun, and Colorado Counties. Some trees completely defoliated in area. (Green).

SPRING CANKERWORM (Paleacrita vernata) - NORTH DAKOTA - Male moths active in Fargo, Cass County, March 18. Females present in tanglefoot bands by March 25. (Anderson). Males evident in Minot, Ward County, by March 15. Females emerged in Minot March 21. (Kaatz). Peak emergence at both locations appears earlier than in 1972. P. vernata along with Alsophila pometaria (fall cankerworm) expected to cause severe defoliation in State again this season. (Brandvik). NEBRASKA - P. vernata males unusually heavy at lights in Lincoln, Lancaster County. Problems expected to increase due to cessation of Dutch elm disease spray program (Roselle, Keith). TEXAS - Heavy infestations defoliated elm trees in Mexia, Limestone County. (Brown).

ELM SPANWORM (Ennomos subsignarius) - CONNECTICUT - Due to an egg parasite Ooencyrtus clisiocampae (an encyrtid wasp) this defoliator not excepted to be problem except for few localized infestations. (Savos, Apr. 4).

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - WEST VIRGINIA - Larvae and pupae collected by A.R. Miller from Virginia pine in 15-acre plantation at Foster, Boone County, on March 20, 1973. Determined by A.R. Miller. This is a new county record. (Hacker).

WHITE PINE WEEVIL (Pissodes strobi) - PENNSYLVANIA - Adults on white pine at Glosgow, Cambria County; up to 50 percent of leaders on 6 acres showed feeding damage March 28. (Adams, Mallis).

NANTUCKET PINE TIP MOTH (Rhyacionia frustrana) - ARKANSAS - Adults heavy and very active in southern area. (Boyer).

EASTERN SPRUCE GALL APHID (Adelges abietis) - PENNSYLVANIA - Overwintering nymphs light to heavy on 25 percent of Norway spruce and white spruce in 2-acre block at Glasgow, Cambria County. Some of these trees unsalable unless controls applied. (Adams, Mallis).

MAN AND ANIMALS

SCREWWORM (Cochliomyia hominivorax) - There were no confirmed cases reported in the continental United States during the period March 25-31. Total of 257 confirmed cases reported in Mexico. This is largest weekly total reported there this year. Total of 66,798,000 sterile flies released in U.S. this period, all in Texas. Total of 107,854,500 sterile flies released in Mexico. (Anim. Health).

CATTLE GRUBS (Hypoderma spp.) - NORTH DAKOTA - Examination of 1,331 head of cattle at 5 livestock auction markets March 12-23, showed 21 percent of animals infested with 1-41 (average 7.4) grubs per animal. This is increase from 15 percent infested with 6.7 grubs per animal in 1972. (Brandvik). KENTUCKY - Averaged 1.3 larvae per back on untreated Holstein dairy cows of various ages in Fayette County. (Barnett).

HORN FLY (Haematobia irritans) - MISSISSIPPI - Ranged up to 100 per cow in Oktibbeha, Clay, Monroe, and Noxubee Counties. (Robinson). OKLAHOMA - Averaged 20 per head on cows and 100 per head on a bull in Payne County. (Okla. Coop. Sur.).

FACE FLY (Musca autumnalis) - MISSISSIPPI - Ranged up to 20 per face on Hereford cattle in Lee County. Ranged 2-3 per face on cattle herd in Monroe County. (Robinson).

CATTLE LICE - OKLAHOMA - Lice, mainly Haematopinus eurysternus (shortnosed cattle louse), averaged 8 per hair part on cattle checked in Payne County. About 1 of each 8 was Linognathus vituli (longnosed cattle louse). Heavy in Delaware, Pawnee, and Hughes Counties, moderate in Pontotoc and Greer Counties; light in Washington County. (Okla. Coop. Sur.).

NORTHERN FOWL MITE (*Ornithonyssus sylviarum*) - MISSISSIPPI - Moderate on 3,000 white leghorn chickens in housed operation in Oktibbeha County. (Robinson). OKLAHOMA - Heavy on large flock of chickens in Greer County. (Okla. Coop. Sur.).

HOUSEHOLDS AND STRUCTURES

EASTERN SUBTERRANEAN TERMITE (*Reticulitermes flavipes*) - CONNECTICUT - First swarms of season occurred March 11-17, about 4 weeks later than in 1972. (Savos). TENNESSEE - First reported swarms of season in western area noted in Fayette County. (Locke).

BENEFICIAL INSECTS

A BRACONID WASP (*Microctonus aethiops*) - OHIO - Recovered from sample of 241 *Hypera postica* (alfalfa weevil) adults collected March 15, 1973, at Wooster, Wayne County. One *M. aethiops* pupa obtained March 19; female emerged March 30. This is a new State record. (Flessel).

A EULOPHID WASP (*Coccophagus albicoxa*) - COLORADO - Parasitized an unspecified scale insect infesting *Arceuthobium cyanocarpum* (a mistletoe) which in turn was parasitizing *Pinus flexilis* (limber pine) about 18 miles west of Fort Collins, Larimer County, at about 7,700 feet elevation. Collected August 5, 1972, by R.B. Penfield. Determined by B.D. Burks. This is a new State record. (Penfield).

AN ICHNEUMON WASP (*Bathyplectes* sp.) - MISSISSIPPI - Vacuum samples of alfalfa indicate 2,300+ adults of this parasite of *Hypera postica* (alfalfa weevil) per acre in Bolivar County. (Schuster).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

CARIBBEAN FRUIT FLY (*Anastrepha suspensa*) - FLORIDA - Two adults taken in McPhail trap at Jacksonville, Duval County, March 23. This collection is at northern limit in range of this species. (Fla. Coop. Sur.).

CEREAL LEAF BEETLE (*Oulema melanopus*) - WEST VIRGINIA - Adults and eggs observed in wild grasses and winter wheat in Mason, Putnam, and Jackson Counties. Eggs averaged 1 per square foot in winter wheat in Mason County. (Hacker).

A GRASS BUG (*Labops hesperius*) - NEBRASKA - First-instar nymphs noted in wheatgrass pastures at Fort Robinson, Dawes County. Egg hatch continued. Wheatgrass about 2-3 inches tall; no evidence of feeding. Damage should become evident within the next 14 days. (Hagen).

GRASSHOPPERS - OKLAHOMA - First-instar nymphs, first of season, active on rangeland in southern Kiowa and Tillman Counties March 29. Viable egg pods averaged 1.5 per square foot in rangeland areas economically infested in summer 1972 in Woodward, Ellis, Harper, Major, Texas, and Panhandle Counties week ending March 31. (Okla. Coop. Sur.).

GYPSY MOTH (*Porthetria dispar*) - CONNECTICUT - Will be problem in many towns this season, particularly in central and eastern parts of State. If above normal temperatures continue, egg masses may begin hatching in late April. (Savos, Apr. 4).

HAWAII INSECT REPORT

Turf and Pastures - Adults of a SKIPPER (*Hylephila phyleus*) trace in grass areas and ornamental shrubbery in memorial parks at Kaneohe and residential areas at Hawaii Kai, Oahu; damage negligible. This hesperiid first recorded in State in 1970, but has not become the pest it is in the continental States. Does not occur on any of the other islands. (Kawamura).

General Vegetables - TARO LEAFHOPPER (*Tarophagus proserpina*) nymphs and/or adults averaged less than 3 per taro plant at Kahaluu, Oahu. Adults of an egg predator, *Cyrtorhinus fulvus* (a mirid bug), trace. (Kawamura).

General Pests - Nymphs and adults of FLATID BUGS (*Melomenis antillarium* and *Siphanta acuta*) fed on mulberry (*Morus* sp.) at Kaumana, Hawaii. *M. antillarium* heavy on terminals of eggplant and tangerine yard plantings at Nuuana; light on backyard Bougainvillea plants at Makiki. (Shiroma, Au). Several specimens of WHITE-MARGINED TREEHOPPER (*Tricentrus albomaculatus*) fed on mulberry at Kaumana, Hawaii, for new host record in State. *T. albomaculatus* first collected in State at Honolulu, Oahu, in 1912; subsequently collected on Hawaii (1963) on *Metrosideros polymorpha* and on Kauai (1972) at large, but not reported. (Shiroma).

Beneficial Insects - Larvae and damage of a HELIODINID MOTH (*Schreckensteinia festaliella*) and a TORTRICID MOTH (*Apotoforma* sp.) moderate in 50+ acres of blackberry at Waikamoi, Maui; activity and damage light at Olinda. (Miyahira).

DETECTION

New State Records - A NOCTUID MOTH (*Euxoa oberfoelli* Hardwick) - SOUTH DAKOTA - This new species, described and named by D.F. Hardwick (Canad. Entomol. 105(1):75-78), considered to extend as far east as Mitchell, Davison County, in central part of its range. A paratype, deposited in the Canadian National Collection, was selected from material collected 2 miles north of Deadwood, Lawrence County, September 9, 1964, at elevation of 4,900 feet. (Jones).

A BRACONID WASP (*Microctonus aethiops*) - OHIO - Wayne County. (p. 214). A EULOPHID WASP (*Coccophagus albicoxa*) - COLORADO - Larimer County. (p. 214). VEGETABLE WEEVIL (*Listroderes costirostris obliquus*) - OREGON - Linn County. (p. 211).

New County and Island Records - NORTHERN CORN ROOTWORM (*Diabrotica longicornis*) WEST VIRGINIA - Monongalia (p. 210). SOUTHERN PINE BEETLE (*Dendroctonus frontalis*) WEST VIRGINIA - Boone (p. 213). WHITE-MARGINED TREEHOPPER (*Tricentrus albomaculatus*) HAWAII - Hawaii, Kauai (p. 215).

LIGHT TRAP COLLECTIONS

FLORIDA - Gainesville, 3/30-4/5, BL, BLACK CUTWORM (*Agrotis ipsilon*) 1, BOLLWORM (*Heliothis zea*) 2, GRANULATE CUTWORM (*Feltia subterranea*) 25, SALTMARSH CATERPILLAR (*Estigmene acrea*) 2, TOBACCO BUDWORM (*H. virescens*) 2, YELLOWSTRIPED ARMYWORM (*Spodoptera exigua*) 7. OHIO - Wooster, 3/31-4/6, BL, Black cutworm 1. TEXAS - Waco, 3/30-4/5, BL, ARMYWORM (*Pseudaletia unipuncta*) 65, black cutworm 1, bollworm 1, saltmarsh caterpillar 2, VARIEGATED CUTWORM (*Peridroma saucia*) 42, yellowstriped armyworm 1.

Weather of the week continued from page 208.

By Saturday, snow fell along the Canadian border from Minnesota to Montana. The storm extended southward. Lander, Wyoming, recorded 9 inches of snow. In the gulf, a Low pushed more rain into the Deep South. Mobile, Alabama, recorded 2.46 and Marietta, Georgia, 2.06 inches. By Sunday, an intense winterlike storm moved through the southern Rockies and southwest Texas. It spread gusty winds, unseasonably low temperatures, and snow into the Plains. Lander, Wyoming, recorded 10 inches of snow, Denver, Colorado, 9 inches, and Amariallo, Texas, 3 inches. Late Sunday, the storm edged its way into the upper Mississippi Valley. Early Monday, over a foot of snow had fallen over parts of Iowa and Wisconsin.

TEMPERATURE: Winter maintained its grip over most of the Rockies and the western Plains. Almost all of Wyoming had temperatures 9 degrees lower than normal, while large areas of Texas and New Mexico fell 10 degrees below normal. In general, most of the Nation's midsection had a week cooler than normal. Monday April 9, cold air pushed southward over the western Plains bringing freezing temperatures as far south as West Texas. Later in the week, a cold front moved out of Canada. Thursday, temperatures stayed in the 30's around Lake Superior. By Friday, winterlike weather began to spread across the Nation's northern half. Winter blizzards and winds had returned to the Rockies in force by Saturday. By Sunday, arctic air plunged the mercury to minus 2 degrees at Lander, Wyoming, breaking the alltime low record for such a late date. Other low records were Scottsbluff, Nebraska and Denver, Colorado, 6 degrees. Elsewhere in the Nation, spring continued to march north. Warmer than normal temperatures clung mainly to the ocean coasts, the Great Lakes area, and some areas in the north-central region. In the East, chilly mornings generally began the day. Temperatures ranged in the 30's and 40's in the North, the 40's and 50's in the South. Southern Florida usually began the day in the 70's. Temperatures generally rose to midday highs in the 50's and 60's for the North, 60's and 70's for the South. Parts of southern Florida reached the low and mid-80's. The west coast maintained higher than average temperatures. Southern California remained 3 degrees above weekly norm and northwards stayed about one degree above normal.

MEDITERRANEAN FRUIT FLY
Ceratitis capitata (Wiedemann)

Selected References
1929-1949

Copies of this bibliography are available from Pest Survey and Technical Support Staff.

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